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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,239	12/06/2001	Roger J. W. Croad	469.1091 (DMP)	4529

21171 7590 08/01/2003

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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,239

Applicant(s)

CROAD ET AL.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Figures 1a, 1b, and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

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- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities: on page 11, lines 32 and 33, the references to "Figure 4" should apparently be --8--, and on page 12, lines 8-9, the reference to "Figures 2 to 4" is apparently incorrect.

Appropriate correction is required.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12, lines 5 and 6-7, the references to "the processing system chamber" lack antecedent basis.

In claim 15, line 2, "comprising" should be --comprises--;
and line 3, "the loading arm" lacks antecedent basis.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 6-8, 11, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms et al (US 4,869,801) in view of Kato et al (US 5,885,054).

Helms et al show an apparatus for loading a substrate 8 onto a processing surface 36 in a processing chamber 1, including movable support 17-19 having an extended position for supporting a substrate above the processing surface and a retracted position in which the support is flush or below the support surface (note beveled edges 22 in figure 2), wherein a loading arm 7 moves between extended and retracted positions and cooperates with the support to load and unload substrates to and from the chamber.

Although the support comprises radially extending arms 17'-17"', they do not contact edges of different sized substrates; instead, pins 18 support the substrates from below.

Kato et al show a substrate support 1 comprising radially extending arms 12 which define a continuous support surface for supporting the edges of different sized substrates 5.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Helms et al by utilizing a substrate support comprising radially extending arms defining a continuous support surface for supporting the edges of different sized substrates, as shown by Kato et al, as this would provide greater flexibility and more precise positioning of the substrates.

Re claim 8, note clamp 35 of Helms et al.

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8. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms et al in view of Kato et al, as applied to claims 1 and 8 above, and further in view of Stevens et al (US 5,810,931).

The modified apparatus of Helms et al does not show details of the clamping ring.

Stevens et al show a substrate clamp in the same environment comprising clamping element 52 extending radially inwardly from outer clamping ring 50 positioned radially outwardly from a processing surface.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Helms et al by constructing the clamp with a clamping element extending radially inwardly from an outer clamping ring positioned radially outwardly from a processing surface, as shown by Stevens et al, as this would simply be the substitution of a well known and art recognized clamping device, the use of which would neither require undue experimentation nor produce unexpected results.

9. Claims 5 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms et al in view of Kato et al, as applied to claims 1 and 3 above, and further in view of Carr et al (US 6,158,951).

The modified apparatus of Helms et al does not show the loading arm to have mountings which extend radially outward to define a number of mounting surfaces.

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Carr et al show a wafer carrier having radially extending mountings 15 which have mounting surfaces 50 thereon.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Helms et al by constructing the loading arm with mountings which extend radially outward to define a number of mounting surfaces, as suggested by Carr et al, as this would provide greater precision during loading and unloading of the substrates to and from the processing chamber.

10. Claims 16-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

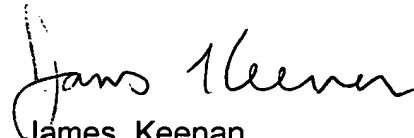
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 703-308-2559.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



James Keenan
Primary Examiner
Art Unit 3652

jwk
July 28, 2003